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EXAMINER CORDRAY, DENNIS R				
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Please find below and/or attached an Office communication concerning this application or proceeding.

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Continuation of No. 11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because:

The amendment after final has been entered because it corrects a grammatical error in Claim 4 and corrects Claim 6 to recite a proper Markush group. A Markush group had been assumed by the Examiner as indicated in the previous Office Action.

Applicant's arguments filed 11/30/2009 have been fully considered but they are not persuasive.

Applicant argues as if Lai et al is being used as an anticipatory reference. It is not. Lai et al teaches an example (Example 12) wherein the vinylamine containing polymer is added at levels of 0.01%, 0.05%. Lai et al also discloses that the vinylamine polymer can comprise free amino units if base hydrolysis is used and protonated amine units (which are cationic) if acid hydrolysis is used, either method of hydrolysis being suitable. Whether or not the hydrolysis is by acid or base, polyvinylamine is known in the art as a weakly cationic polymer due to protonation of the amines in aqueous solution, the amount of protonation being a function of the pH. Acid hydrolysis provides an environment enriched in hydrogen ions, thus significantly increasing the amount of protonated amines. One of ordinary skill in the art would have seen the polyvinylamine of Lai et al as a cationic polymer containing vinylamine units.

The disclosure of Lai et al can be considered in alternative ways. On one hand, an amount of polyvinylamine well within the claimed range and an amount of touching one endpoint of the claimed range are used.

On the other hand, while the preferred range of Lai et al is 0.1 to 0.2 wt-%, the more broadly disclosed range is 0.05 to 0.5 wt-%, which touches but does not overlap the claimed range. In such instances, "... a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of "having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium" as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.)." (See MPEP 2144.05). One of ordinary skill in the art would have expected substantially the same properties in a paper made using polyvinylamine at a level of 0.05% vs a level of slightly less than 0.05% and lying within the claimed range.

Applicant's argument that Lai et al teaches to one of ordinary skill in the art that using an amount of polyvinylamine less than the disclosed range is no better than adding a conventional poly(vinylamide) or adding no polymer at all (pp 6-8) is the argument of counsel and cannot take the place of evidence in the record. One of ordinary skill would not have expected an abrupt cessation of benefit as the polyvinylamine addition level drops to less than 0.05%, but rather a gradual change. Furthermore, as discussed in the paragraph immediately preceding, little if any change would have been expected between an addition level of 0.05% and a value slightly less than 0.05%.

Regarding the combination of Hartmann in view of Utecht et al, both references disclose vinylamine containing polymers that can be cationic and thus have substantially the same structure as the claimed polymers. Utecht et al teaches that the polymers are used as retention, drainage and flocculation aids in papermaking (added in amounts from 0.01 to 0.1% by weight based on dry fibers) as well as fixing agents for contraries and as emulsifiers for preparing filler slurries. Retention aids are used to retain non-fibrous additives, such as fillers in paper. Utecht et al discloses suitable fillers for papermaking include clay, chalk, titanium dioxide and kaolin. One of ordinary skill in the art would have expected the polymers of Utecht et al to function as retention aids for any of the disclosed fillers. The polymers of Hartmann, which are similar although not exactly the same as those of Utecht et al, are disclosed generally as drainage and retention aids for papermaking, with a specific example of using the polymers with a kaolin filler. One of ordinary skill in the art would have expected the polymers of Hartmann to also work as retention aids with other commonly used fillers, such as those disclosed by Utecht et al.

Regarding the amounts of polymer used by Hartmann in the disclosed example, a similar discussion applies as used above with Lai et al. In addition, Utecht et al teaches using similar polymers in amounts as low as 0.01%, which lies within the claimed range. One of ordinary skill in the art would have realized that retention and drainage aids can be used in a range of addition amounts rather than the specific addition used in the example of Hartmann and would have turned to other art disclosing

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similar polymers (e.g.-Utecht et al) guidance. Obtaining the claimed ash retention would have been obvious for reasons given in the previous Final Office Action.

The outstanding rejections are maintained.

/Eric Hug/

Primary Examiner, Art Unit 1791